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Service Information

Advanced Automation Systems
Audio-communications
Broadcast Equipment
Electronic Security & Recording Systems
Industrial Automation
Scientific & Analytical Equipment
Test and Measurement

Industrial & Electro-acoustic Systems Division

900130 **PM2525/021/...** **SME149**

Concerns: New version /021 and following of PM2525

Already issued: SME137, SME139, SME144

As Service documentation for the PM2525/021/... should be used:

Service manual		4822 872 35308
Service information	SME137	4822 872 38321
	SME139	4822 872 38323
	SME144	4822 872 38328

and this information sheet.

Main modifications of PM2525/021/... with respect to version PM2525/01

- -Improved specifications
- -New mainprinted circuitboard with rearranged components layout.
- -Extended calibration procedure

Contents of this information sheet

1. Typenumber overview
2. Modified specification
3. Additional Performance test
4. Modified Calibration procedure
5. Modified circuitdiagrams and printed circuitboards layouts.

4822 872 38334
Printed in the netherlands

1. TYPENUMBER OVERVIEW

PM2525	/021	EU	Standard
	/023	USA	
	/024	UK	
	/025	CH	
PM2525	/221	EU	Battery version
	/223	USA	
	/224	UK	
	/225	CH	
PM2525	/521	EU	IEEE-488
	/523	USA	
	/524	UK	
	/525	CH	
PM2525	/621	EU	RS232C
	/623	USA	
	/624	UK	
	/625	CH	
PM2525	/721	EU	Analog output
	/723	USA	
	/724	UK	
	/725	CH	

2. MODIFIED SPECIFICATION

	PM2525/01	**PM2525/021/...**
DC voltage measurements		
Temp.coefficient	±0.003 % rdg /°C	±0.002 % rdg /°C
Accuracy ±% rdg ±% rng	0.02 0.01	Speed 1,2 0.02 0.01 Speed 3 0.15 0.1
dB measurements in DC ranges		
Accuracy	±0.2 dB>1 mV ±1 dB<1 mV	Speed 1,2 0.1 dB>5 mV Speed 3 0.4 dB>5 mV Speed 1,2 1 dB>0.5mV<5mV
Temp. coefficient	±0.0013 dB/ C	0.02 dB/°C >5 mV ±0..2 dB/°C >0.5 mV;<5 mV

	PM 2525/01		PM 2525/021/...	
AC voltage measurements				
Accuracy (between 3%-100% of range) (±% of reading ±% of range)				
Range 200 mV				
20 Hz...40 Hz		-	0.6	0.2
40 Hz...100 Hz	0.3	0.1	0.2	0.1
100 Hz...20 kHz	1	0.5	0.8	0.2
20 kHz...100 kHz	±2 dB		-	
20 kHz...50 kHz		-	2.5	0.5
50 Hz...100 kHz		-	4.0	0.5
Range 2 V, 20 V, 200 V				
20 Hz...40 Hz		-	0.6	0.2
40 Hz...100 Hz	0.3	0.1	0.2	0.1
100 Hz...20 kHz	1	0.1	0.8	0.2
20 kHz...100 kHz	5	0.5	-	
20 kHz...50 kHz		-	2.5	0.5
50 kHz...100 kHz		-	4.0	0.5
Range 2000 V				
40 Hz...60 Hz	0.3	0.1	-	
20 Hz...40 Hz		-	0.6	0.2
40 Hz...70 Hz		-	0.2	0.1
Temp. coefficient (±% of reading ±% of range)/°C	0.03	0.01	0.025	0.005
dB measurements in AC ranges				
Accuracy Signals				
-42.2 dB...+47.3 dB	40 Hz...20 kHz ±0.2 dB			
-42.2 dB...-11.7 dB	20 kHz...100 kHz ±2 dB			
+43.7 dB...+59.7 dB	40 Hz...60 Hz ±0.2 dB			
-11.7 dB...+47.3 dB	20 kHz...100 kHz ±1 dB			
-42.2 dB...-32.6 dB			20 Hz...20 kHz ±0.8 dB	
-32.6 dB...+48.2 dB			20 Hz...20 kHz ±0.4 dB	
-32.6 dB...+48.2 dB			20 kHz...100 kHz ±1 dB	
Frequency range	40 Hz...100 kHz		20 Hz...100 kHz	

	PM 2525/01	PM 2525/021/...
Vpeak measurements		Maximum dV/dt Range — Time 2 V — <2 V/µs 20 V — <20 V/µs 200 V — <200 V/µs 2000 V — <0.5 V/µs
DC current measurements		
Accuracy ±% rdg ±% rng	0.1 0.05	Speed 2 0.1 0.5 Speed 3* 0.2 0.2 * Speed 3 only programmable via interface.
AC current measurements		
Accuracy (between 5%-100% of range) (±% of reading ±% of range)		
Range 1 µA...100 mA		
20 Hz...40 Hz	-	0.6 0.2
40 Hz...200 Hz	0.4 0.15	0.4 0.15
200 Hz...500 Hz	-	0.6 0.2
Range 1 A...10 A		
20 Hz...40 Hz	-	0.6 0.2
40 Hz...200 Hz	0.4 0.15	0.4 0.15
200 Hz...500 Hz	-	3.0 1.0
Frequency range	40Hz...200Hz	20Hz...500Hz
Resistance measurements		
Accuracy ±% rdg ±% rng		
Range		
200 Ω-200 kΩ	0.1 0.05	Speed 2 0.1 0.05 Speed 3* 0.15 0.15
2 MΩ-20 MΩ	0.5 0.1	Speed 2 0.5 0.05 Speed 3* 0.5 0.15
200 MΩ	5 1	Speed 2 3 1 Speed 3* 5 1 * Speed 3 only programmable via interface.
Operating conditions		
Reference Temperature	23 °C ±1 °C	23 °C ± 5 °C

3. ADDITIONAL PERFORMANCE TEST

The meter should be calibrated and in operating condition when you receive it.

The following performance tests are provided to ensure that the meter is in a proper operating condition. If the instrument fails any of the performance tests, then calibration adjustments and / or repair is needed.

To perform these tests, you will need a:

- Fluke 5100B Multifunction Calibrator (or equivalents).
- Philips PM5390 Frequency Generator
- Resistor of 1 MΩ 0.1%.
- Capacitor of 20 nF 0.5%.
- Capacitor of 2 µF 0.5%.
- Philips PM9264/01 four-wire OHM cable.

Each of the measurements listed in the following steps assume the instrument is being tested after a one-hour warmup, in an environment with an ambient temperature of 18 to 28°C, and a relative humidity of less than 80%.

NOTE: All measurements listed in the performance tests tables are made in the initial measuring speeds. These speeds are automatically switched on when the functions are selected (unless otherwise stated).
The ranges of the meter must be selected in the manual ranging mode.

1 Power-up the meter and allow it to stabilize for one hour.

2. Connect a cable from the Output HI and LO connectors of the Fluke 5100B to the V-·Ω-mA and 0 connectors on the PM2525.
   Select the function and range on the PM2525 and the input level from the Fluke 5100B using the values listed in the tables. The display should read between the minimum and maximum values listed in the tables.

3. In some cases another calibrator source is needed.
   This is clearly mentioned in the tables.

Performance test 1 PM2525

DC volts

FUNCTION	RANGE (SPEED 2)	INPUT LEVEL	FREQUENCY	DISPLAY	
				MIN	MAX
V ⎓	200 mV	short	-	- 000.02	+000.02
	200 mV	+199.999 mV	-	+199.94	+200.06
	200 mV	- 199.999 mV	-	- 200.06	- 199.94
	2 V	+1.99999 V	-	+1.9994	+2.0006
	2 V	- 1.99999 V	-	- 2.0006	+1.9994
	20 V	+10.0000 V	-	+09.996	+10.004
	20 V	+15.0000 V	-	+14.995	+15.005
	20 V	+19.9999 V	-	+19.994	+20.006
	20 V	- 10.0000 V	-	- 10.004	- 09.996
	20 V	- 15.0000 V	-	- 15.005	- 14.995
	20 V	- 19.9999 V	-	- 20.006	- 19.994
	200 V	+199.999 V	-	+199.94	+200.06
	200 V	- 199.999 V	-	- 200.06	- 199.94
	2000 V	+0990.00 V	-	+0989.6	+0990.4
	2000 V	- 0990.00 V	-	- 0990.4	- 0989.6

AC volts

FUNCTION	RANGE	INPUT LEVEL	FREQUENCY	DISPLAY	
				MIN	MAX
V ~	200 mV	short	-	-	<000.16
	200 mV	199.999 mV	60 Hz *	199.40	200.60
	200 mV	199.999 mV	300 Hz	198.00	202.00
	200 mV	199.999 mV	1 kHz	198.00	202.00
	200 mV	199.999 mV	20 kHz	194.00	206.00
	200 mV	199.999 mV	50 kHz	194.00	206.00
	2 V	1.99999 V	60 Hz *	1.9940	2.0060
	2 V	1.99999 V	300 Hz	1.9800	2.0200
	2 V	0.50000 V	1 kHz	0.4920	0.5080
	2 V	1.00000 V	1 kHz	0.9880	1.0120
	2 V	1.99999 V	1 kHz	1.9800	2.0200
	2 V	1.99999 V	20 kHz	1.9800	2.0200
	2 V	1.99999 V	50 kHz	1.9400	2.0600
	20 V	07.0000 V	60 Hz *	06.966	07.034
	20 V	10.0000 V	60 Hz *	09.960	10.040
	20 V	19.9999 V	60 Hz *	19.940	20.060
	20 V	19.9999 V	300 Hz	19.980	20.200
	20 V	19.9999 V	1 kHz	19.980	20.200
	20 V	19.9999 V	20 kHz	19.980	20.200
	20 V	19.9999 V	50 kHz	19.400	20.600
	200 V	199.999 V	60 Hz *	199.40	200.60
	200 V	199.999 V	300 Hz	198.00	202.00
	200 V	199.999 V	1 kHz	198.00	202.00
	200 V	199.999 V	20 kHz	198.00	202.00
	2000 V	0600.00 V	60 Hz *	0596.8	0603.2
V $\overline{\sim}$	2 V	+1.99999 V	-	+1.9940	+2.0060
	2 V	- 1.99999 V	-	- 2.0060	- 1.9940
	2 V	1.99999 V	60 Hz *	1.9940	2.0060
	2 V	1.99999 V	20 kHz	1.9800	2.0200

*If the PM2525 is used in a 60 Hz line power environment, use a 70 Hz input level signal.

Performance test 3 PM2525

Vpeak

FUNCTION	RANGE	INPUT LEVEL	FREQUENCY	DISPLAY	
				MIN	MAX
VPU^	2 V	SHORT	-	- 0.002	+0.002
	2 V	+1.99999 V		+1.970	+2.030
	20 V	+19.9999 V	-	+19.70	+20.30
VPLv	2 V	-1.99999 V	-	- 2.030	- 1.970
	20 V	-19.9999 V	-	- 20.30	- 19.70
VPU^	2 V	+1.41400 V	70 Hz	+1.970	+2.030
	2 V	+1.41400 V	50 kHz	+1.890	+2.110
VPLv	2 V	-1.41400 V	70 Hz	- 2.030	- 1.970
	2 V	-1.41400 V	50 kHz	- 2.110	- 1.890
VPU^	200 V	+199.999 V	-	+197.0	+203.0
	2000 V	+0500.00 V	-	+0485	+0515

Performance test 4 PM2525

RTW (Resistance Two-Wire) and RFW (Resistance Four-Wire)

FUNCTION	RANGE	INPUT LEVEL	FREQUENCY	DISPLAY	
				MIN	MAX
Ω2W	200 Ω	100 Ω	-	099.80	100.20
	2 kΩ	1 kΩ	-	0.9980	1.0020
	20 kΩ	10 kΩ	-	09.980	10.020
	200 kΩ	100 kΩ	-	099.80	100.20
	2 MΩ	1 MΩ	-	0.9940	1.0060
	20 MΩ	10 MΩ	-	09.940	10.060
	200 MΩ	100 MΩ*	-	095.0	105.0

*The Fluke 5100B cannot deliver 100MΩ. Use another external source.

FUNCTION	RANGE	INPUT LEVEL	FREQUENCY	DISPLAY	
				MIN	MAX
Ω4W**	200 Ω	SHORT	-	-	<000.08
	200 Ω	100 Ω	-	099.80	100.20
	2 kΩ	1 kΩ	-	0.9980	1.0020
	20 kΩ	10 kΩ	-	09.980	10.020
	200 kΩ	100 kΩ	-	099.80	100.20
	2 MΩ	1 MΩ	-	0.9940	1.0060

**Use the four-wire OHM cable PM9264/01.
Connect the PM9264/01 to the PROBE connector of the PM2525 and the HI and LO connectors of the Fluke 5100B.
Remove the leads from the V-Ω-mA and 0 connector of the PM2525.

IDC (DC currents) and IAC (AC currents)

FUNCTION	RANGE	INPUT LEVEL	FREQUENCY	DISPLAY	
				MIN	MAX
A ⎓	1 µA	open	-	- 0.0005	+0.0005
	1 µA	+1 µA*	-	+0.9985	+1.0015
	1 µA	-1 µA*	-	- 1.0015	- 0.9985
	10 µA	+10 µA*	-	+09.985	+10.015
	100 µA	open	-	- 000.04	+000.04
	100 µA	+100 µA	-	+099.85	+100.15
	100 µA	-100 µA	-	- 100.15	- 099.85
	1 mA	+1 mA	-	+0.9985	+1.0015
	10 mA	+10 mA	-	+09.985	+10.015
	100 mA	+100 mA	-	+099.85	+100.15
	1 A	+1 A	-	+0.9985	+1.0015
	10 A	+1.99999 A	-	+01.993	+02.007

*The Fluke 5100B cannot deliver 1 µA and 10 µA accurate enough. To check the ranges connect a 1 MΩ resistor of 0.1 % in series with the HI output of the calibrator.
For 1 µA set the calibrator to +1 V.
For 10 µA set the calibrator to +10 V.

FUNCTION	RANGE	INPUT LEVEL	FREQUENCY	DISPLAY	
				MIN	MAX
A ~	10 µA	10 µA	60 Hz *	09.945	10.055
	100 µA	100 µA	60 Hz*	099.45	100.55
	1 mA	1 mA	60 Hz*	0.9945	1.0055
	1 mA	1 mA	200 Hz	0.9945	1.0055
	10 mA	10 mA	60 Hz*	09.945	10.055
	1 A	50 mA	60 Hz*	0.0483	0.0517

*If a PM2525 is used in a 60Hz line power environment, use a 70 Hz input level signal.

CONT (Continuity), F (Capacitance), °C (Temperature) and Hz (Frequency).

FUNCTION	RANGE	INPUT LEVEL	FREQUENCY	DISPLAY	
				MIN	MAX
Cont	CONT	short	-	closed +audible tone	
	CONT	open	-	open	

FUNCTION	RANGE	INPUT LEVEL	FREQUENCY	DISPLAY	
				MIN	MAX
F	20 nF	20 nF *	-	19.780	20.220
	2 µF	2 µF *	-	1.9780	2.0220

*Connect external capacitors to the PM2525.
-20 nF 0.5%
-2 µF 0.5%

FUNCTION	RANGE	INPUT LEVEL	FREQUENCY	DISPLAY	
				MIN	MAX
°C	°C	100 Ω**	-	-000.3	+000.3

**Use the four-wire OHM cable PM9264/01.
Connect the P9264/01 to the PROBE connector of the PM2525 and the HI and LO connectors of the Fluke 5100B.
Remove the leads from the V-Ω-mA and 0 connector of the PM2525.

FUNCTION	RANGE (Speed2)	INPUT LEVEL	FREQUENCY	DISPLAY	
				MIN	MAX
Hz	100 kHz	2 Vpp***	100 kHz	099.97	100.03
	1 MHz	2 Vpp***	1 MHz	0.9997	1.0003
	1 MHz	2 Vpp***	10 MHz	00.997	01.003

***Use the PM5390 Frequency Generator as calibrator.

4. MODIFIED CALIBRATION PROCEDURE

In the PM2525/021/... four additional / modified calibration points have been implemented (NO 12b, 14b,14c and 19)

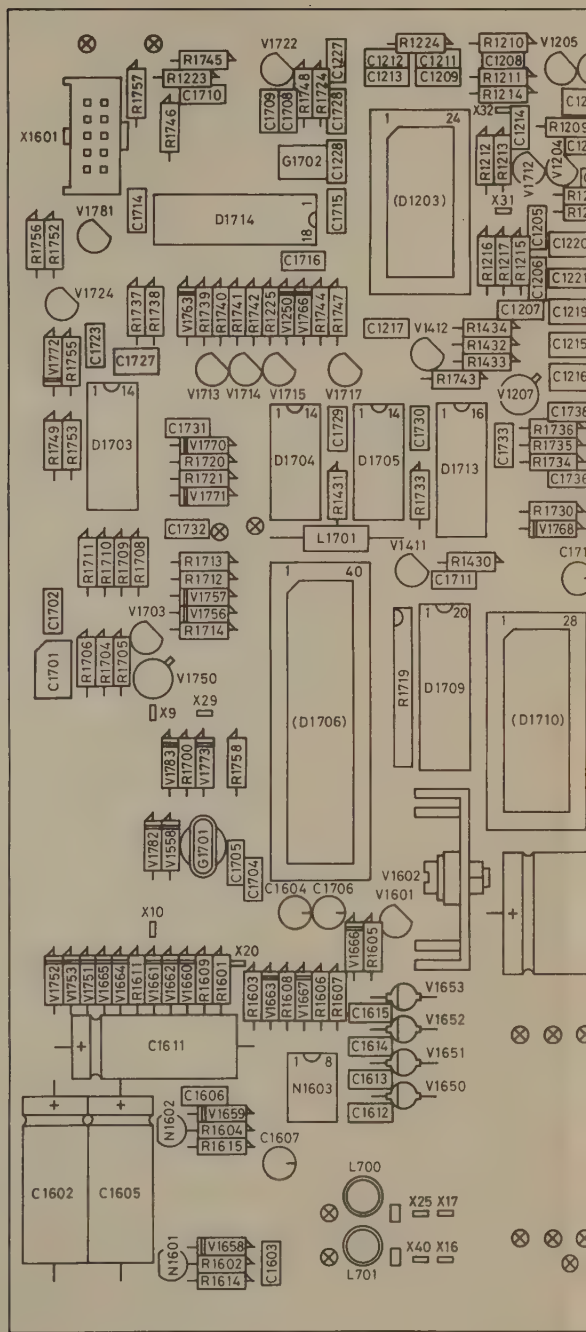
5.5.6.3 Cold/Hot calibrations

Adj.No		Adj	Cold	Hot
10	1 MHz	f.s	X	-
11	1 µA DC	zero (open)	X	X
12a	100 µA DC	zero (open)	X	X
12b	**1 A DC**	**zero (open)**	**X**	**X**
13	20 nF	zero (open)	X	-
14a	200 ΩFW	zero	X	X
14b	**2 ΩTW**	**zero**	**X**	**X**
14c	**200 ΩFW**	**zero**	**X**	**X**
15	2 kΩFW	1 kΩ	X	X
16	20 kΩFW	10 kΩ	X	X
17	TDC	0 Ω	X	X
18	TDC	100 Ω	X	X
19	**200 MΩTW**	**100 MΩ**	**X**	**X**
20	1 µADC	1 µA	X	X
21	10 µADC	10 µA	X	X
22	1 ADC	1 A	X	X
23	200 mVDC	zero	X	X
24	2 VDC	zero	X	X
25	20 VDC	zero	X	X
26	200 VDC	zero	X	X
27	2 VPU	zero	X	X
28	2 VPL	zero	X	X
29	200 mVDC	200 mV	X	X
30	2 VDC	2 V	X	X
31	20 VDC	20 V	X	X
32	20 VDC	-20 V	X	-
33	2 VPU	2 V	X	X
34	2 VPL	-2 V	X	X
35	200 mVAC	200 mV/60 Hz	X	-
36	2 VAC	2 V/60 Hz	X	X
37	20 VAC	20 V/60 Hz	X	-
38	200 kΩ	100 kΩ	X	X
39	2 MΩ	1 MΩ	X	X
40	20 MΩ	10 MΩ	X	X
41	1 mADC	1 mA	X	X
42	100 mADC	100 mA	X	X
43	1 mAAC	1 mA/60 Hz	X	X
44	200 VAC	200 V/60 Hz	X	-
45	2000 VAC	600 V/60 Hz	X	-
46	200 VDC	200 V	X	-
47	2000 VDC	1000 V	X	-

5.5.7 Calibrationtable

Nr.	Function	Range	Input signal	Display before calibration	Display before calibration	Remarks
10*	Hz (only cold)	1 MHz	1 MHz 2 Vpp ±2 Hz	1.00000 CMHz	1.00000 rMHz	
11	IDC	1 µA	open input	1.0000 CµA	0.0000 rµA	
12a	IDC	100 µA	open input	100.00 CµA	000.00 rµA	
12b	**IDC**	**1 A**	**open input**	**1.0000 CA**	**0.0000 rA**	
13*	F (only cold)	20 nF	open input	20.000 CnF	00.000 rµF	
14a	RFW	200 Ω	0 Ω	200.00 CΩ	000.00 rΩ	Use 4 wire cable
14b	**RTW**	**2 kΩ**	**0 Ω**	**1.0000 CkΩ**	**0.0000 rkΩ**	
14c	**RFW**	**200 Ω**	**0 Ω**	**200.00 cΩ**	**000.00 rΩ**	
15	RFW	2 kΩ	1 kΩ ±0.04%	1.0000 CkΩ	1.0000 rkΩ	Use 4 wire cable
16	RFW	20 kΩ	10 kΩ ±0.04%	10.000 CkΩ	10.000 rkΩ	Use 4 wire cable
17	TDCΩ	- 246°C	0 Ω	000.0 C°C	-246.8 r°C	Use 4 wire cable
18	TDCΩ	0 °C	100 Ω ±0.1%	000.0 C°C	000.0 r°C	Use 4 wire cable
19	**RTW**	**200 MΩ**	**100 MΩ** ±1%	**100.0 MΩ**	**100.0 rMΩ**	See section 5.5.7
20	IDC	1 µA	1 µA ⎓ ±0.03%	1.0000 CµA	1.0000 rµA	See section 5.5.4
21	IDC	10 µA	10 µA ⎓ ±0.03%	10.000 CµA	10.000 rµA	See section 5.5.4
22	IDC	1 A	1 A ⎓ ±0.03%	1.0000 CA	1.0000 rA	
23	VDC	200 mV	0	200.000 CmV	000.00 rmV	
24	VDC	2 V	0	2.00000 CV	0.00000 rV	
25	VDC	20 V	0	20.00000 CV	00.0000 rV	
26	VDC	200 V	0	200.000 CV	000.000 rV	
27	VPU	2 V	0	2.000 CVP~	0.000 rVP~	
28	VPL	2 V	0	2.000 CVP~	0.000 rVP~	
29	VDC	200 mV	200 mV ⎓ ±0.006%	200.000 CmV	+200.000 rmV	
30	VDC	2 V	2 V ⎓ ±0.006%	2.00000 CV	+2.00000 rV	
31	VDC	20 V	20 V ⎓	20.0000 CV	+20.0000 rV	
32*	VDC (only cold)	20 V	-20 V ⎓ ±0.006%	20.0000 CV	-20.0000 rV	
33	VPU	2 V	2 V ⎓ ±0.3%	2.000 CVP^	2.000 rVP^	
34	VPL	2 V	-2 V ⎓ ±0.3%	2.000 CVPv	2.000 rVPv	
35*	VAC (only cold)	200 mV	200 mV 60 Hz ±0.08%	200.00 CmV~	200.00 rmV~	

Nr.	Function	Range	Input signal	Display before calibration	Display before calibration	Remarks
36	VAC	2 V	2 V 60Hz ±0.08%	2.0000 CV~	2.0000 rV~	
37*	VAC (only cold)	20 V	20 V 60Hz ±0.08%	20.000 CV~	20.000 rV~	
38	RTW	200 kΩ	100 kΩ ±0.04%	100.00 CkΩ	100.00 rkΩ	
39	RTW	2 MΩ	1 MΩ ±0.14%	1.0000 CMΩ	1.0000 rMΩ	
40	RTW	20 MΩ	10 MΩ ±0.14%	10.000 CMΩ	10.000 rMΩ	
41	IDC	1 mA	1 mA ⎓ ±0.03%	1.0000 CmA	1.0000 rmA	
42	IDC	100 mA	100 mA ±0.03%	100.00 CmA	100.00 rmA	
43	IAC	1 mA	1 mA 60Hz ±0.11%	1.0000 CmA	1.0000 rmA	
44	VAC	200 V	200 V 60Hz ±0.08%	200.00 CV	200.00 rV	
45*	VAC (only cold)	2000 V	600 V 60Hz ±0.1266%	0600.0 CV	0600.0 rV	
46*	VDC (only cold)	200 V	200 V ⎓ ±0.006%	200.000 CV	200.000 rV	
47*	VDC (only cold)	2000 V	1000 V ⎓ ±0.008%	1000.00 CV	1000.00 rV	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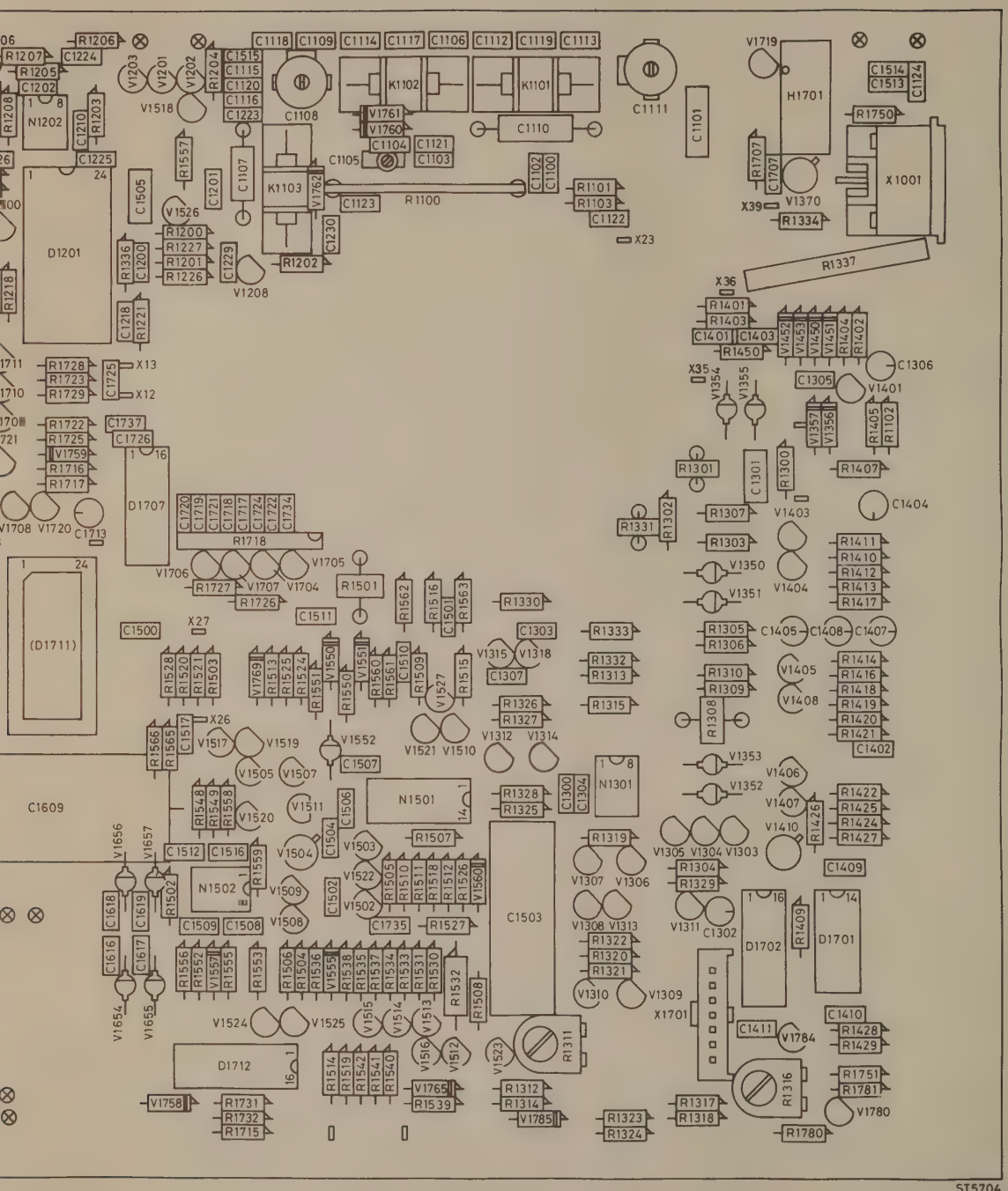
R1735
R1734
C1733
V1207
V1412
R1434
R1432
R1433
R1743
C1217
C1207
C1219
C1215
C1216
V1204
V1712
X31
X32
C1205
C1206
C1214
R1212
R1213
R1216
R1217
R1215
C1221
R1224
C1212
C1213
C1211
C1209
R1210
V1205
C1208
R1211
R1214
(D1203)



ST5704
900202

PC Board A

SHUNTS

ATTENUATORS

A-FUNCTION

INTERNAL TEMPERATURE

INVERTOR

CHARGE

DISCHARGE

BUFFER

CURRENT SOURCE

CHARGING CAPACITOR

* R1100A÷E* NETWORK OM551

A/.2.

ST5345
891113

NI ANALOG A

	PIN NUMBER		
IC	-5V	▽	
D1701	7	14	
D1702	8	16,2,10	

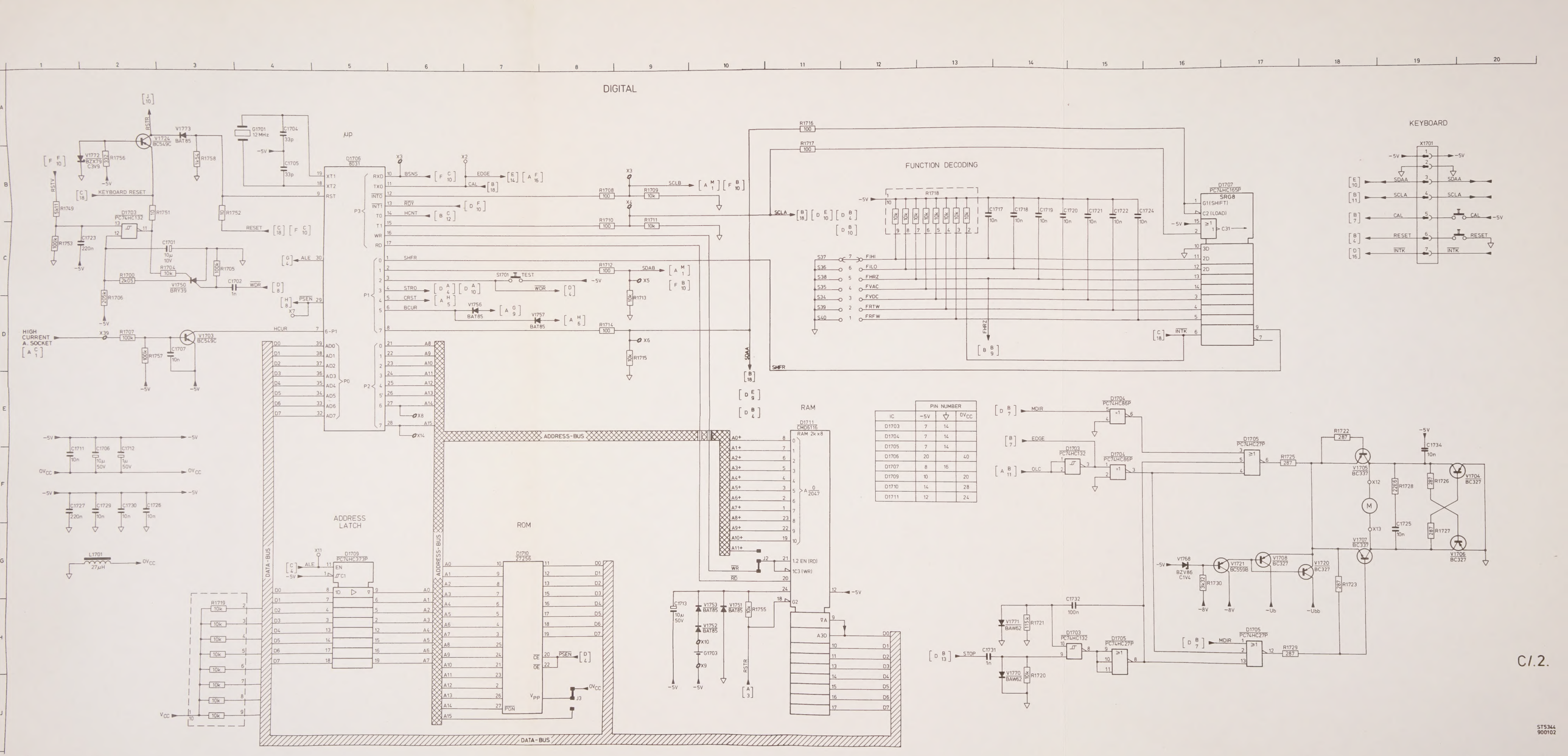
BUFFER

RMS CONVERTOR

B/.2.

ST5370
900202

NI ANALOG B

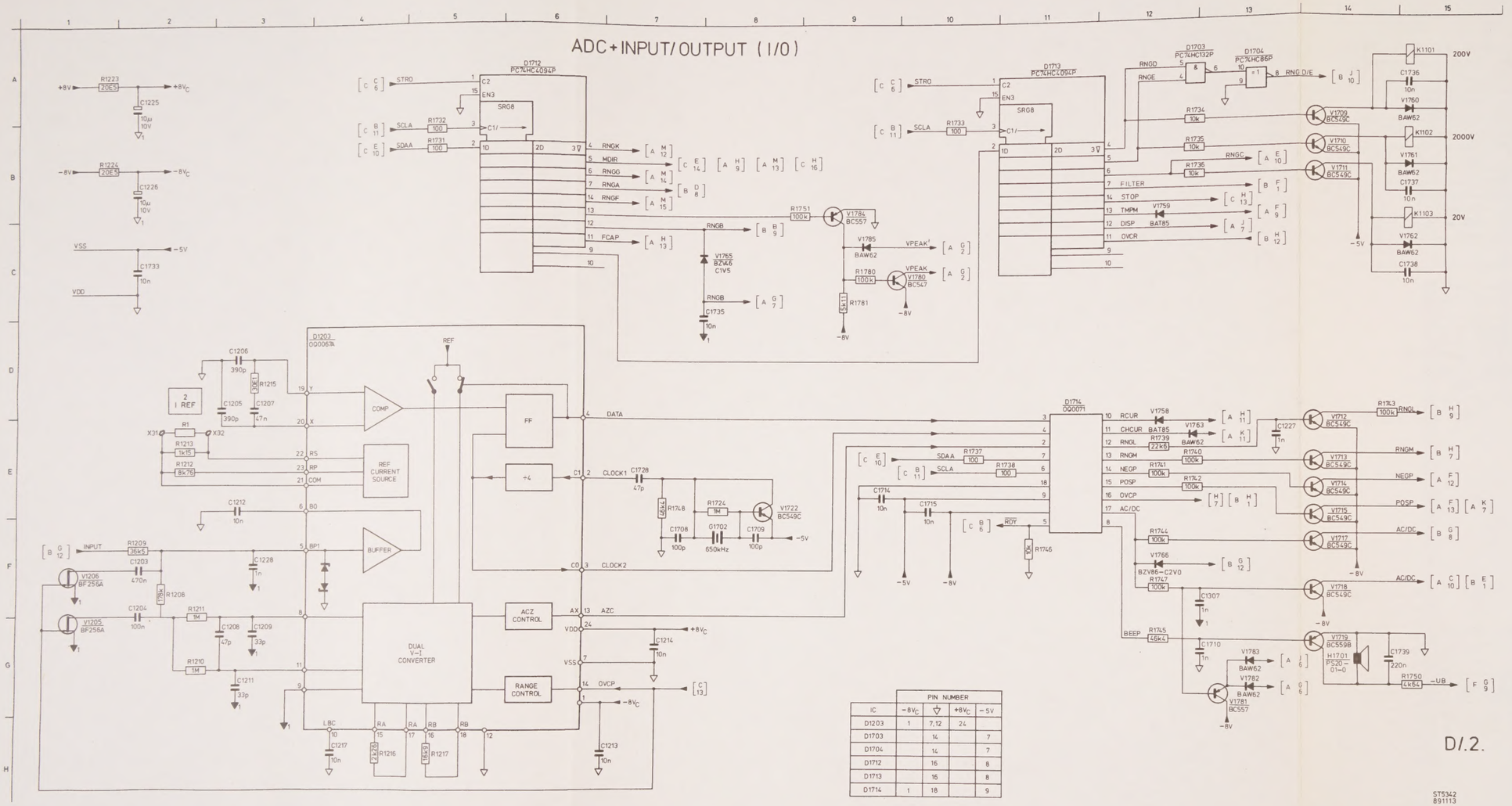


IC	PIN NUMBER -5V		PIN NUMBER 0VCC
D1703	7	14	
D1704	7	14	
D1705	7	14	
D1706	20		40
D1707	8	16	
D1709	10		20
D1710	14		28
D1711	12		24

C/.2.

ST5344
900102

NI DIGITAL C


ADC+INPUT/OUTPUT (I/O)
D1712 PC74HC4094P
D1713 PC74HC4094P
D1703 PC74HC132P
D1704 PC74HC86P
D1203 OQ0063A
D1714 OQ0071
STRO
SCLA
SDAA
SRG8
RNGK
MDIR
RNGG
RNGA
RNGF
FCAP
RNGB
FILTER
STOP
TMPM
DISP
OVCR
RNGD
RNGE
RNG D/E
VPEAK'
VPEAK
BAT85
BAW62
BZV46 C1V5
BZV86-C2V0
BC557
BC547
BC549C
BC559B
200V
2000V
20V
-5V
-8V
R1223 20E5
R1224 20E5
C1225 10µ 10V
C1226 10µ 10V
C1733 10n
VSS
VDD
R1732 100
R1733 100
R1731 100
R1734 10k
R1735 10k
R1736 10k
R1751 100k
R1780 100k
R1781 5k11
C1735 10n
C1736 10n
C1737 10n
C1738 10n
K1101
K1102
K1103
V1709
V1710
V1711
V1712
V1713
V1714
V1715
V1716
V1717
V1718
V1719
V1720
V1721
V1722
V1759
V1760
V1761
V1762
V1763
V1765
V1766
V1780
V1781
V1782
V1783
V1784
V1785
H1701 P520-01-0
C1739 220n
R1750 4k64
-UB
REF
COMP
FF
÷4
REF CURRENT SOURCE
BUFFER
DUAL V-I CONVERTER
ACZ CONTROL
RANGE CONTROL
DATA
CLOCK1
CLOCK2
AZC
OVCP
INPUT
BF256A
X31
X32
R1
R1213 1k15
R1212 8k76
R1215 1k
R1216 1k
R1217 15k3
R1208 15k
R1209 36k5
R1210 1M
R1211 1M
R1212 10n
R1746 46k4
R1748
R1724 1M
R1737 100
R1738 100
R1739 22k6
R1740 100k
R1741 100k
R1742 100k
R1744 100k
R1745 46k4
R1746 2k
R1747 100k
C1205 390p
C1206 390p
C1207 47n
C1208 47p
C1209 33p
C1211 33p
C1212 10n
C1214 10n
C1217 10n
C1213 10n
C1203 470n
C1204 100n
C1228 1n
C1227 1n
C1307 1n
C1710 1n
C1728 47p
C1708 100p
C1709 100p
G1702 650kHz
C1714 10n
C1715 10n
RDY
RCUR
CHCUR
RNGL
RNGM
NEGP
POSP
AC/DC
BEEP
LBC
RA
RB
2 I REF
PIN NUMBER
IC
-8VC
+8VC
-5V
D1203 1 7,12 24
D1703 14 7
D1704 14 7
D1712 16 8
D1713 16 8
D1714 1 18 9
D/.2.
ST5342
891113

ADC I/O D